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Libby Asbestos Superfund Site Operable Unit 3

Soil Disposal Plan

Libby Asbestos Project

Contract No. W912DQ-08-D-0018 DK01
Task Order No. DK01

Prepared for:

ENVIRONMENTAL PROTECTION AGENCY
Region 8

Prepared by:

U.S. Army Corps of Engineers
Omaha District
Rapid Response Program
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TIME	MONDAY July 11, 2011	TUESDAY July 12, 2011	WEDNESDAY July 13, 2011	THURSDAY July 14, 2011
7:00 AM			Libby City Council Breakfast @Henry's	
8:00 AM	Check emails; return calls	8:00 to 9:00 am HCI Healthy Communities Initiative-ST. John's Hospital	8:00-10:00 am O & M Meeting @ Frontier Communications Building 114 E 4th ST	
9:00 AM			9:00 am-11am CP & MC USFS Canoe Gulch Ranger station D.Berry, J.Pod	
9:30 AM		9:30-11:00 am Weekly Construction Meeting @ Flathead Valley Community College		Travel to Spokane
10:00 AM	Woodchip Mtg@336 Northwood Ave w/MC & NP		10-11:00 County Commissioners County Courthouse	
11:00 AM		Risk Assessment David Berry		
11:15 AM			11:15 to 1:00 pm L. Fagen_meeting with NR	
12:00 PM	LUNCH	LUNCH	Chamber Luncheon Guest Speakers from Montore Mine Fiesta Bonita	LUNCH
1:30 PM	Standing Meeting every Monday @ EPA Info Center USACE, MC	1:30-4:30 pm General Property Investigations and Activity Based Sampling-NR	1:30 pm EMSL Lab visit w/ Don Goodrich	
3:00 PM	Denver EPA Team Arrival		3:00 pm Troy Prep Lab Visit Don Goodrich	
3:00 PM			3:00 PM C. Progess meet w/T. Cook @ Info Center	
4:00 PM	Site Tour w/MC		4:00 pm Ross Creek Cedars	
5:00 PM	Dinner	5:00 PM Dinner		
6:00 PM	Libby City Council	6-8:00 PM TAG Flathead Valley Community College Presentation by M. Cirian		Community Advisory Group Meeting Moved to 21st of July

Chastina -
Mel Parker called
& requested a return
call.
293-9705

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Contents

Acronyms

ACM	Asbestos-containing material
APP	Accident Prevention Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EPA	Environmental Protection Agency
HAZWOPER	Hazardous Waste Operations and Emergency Response
HEPA	High Efficiency Particulate Air
LA	Libby Amphibole Asbestos
LACS	Libby Amphibole Contaminated Soil
OSHA	Occupational Safety and Health Administration
PAPR	Powered Air Purifying Respirator
PPE	Personal Protective Equipment
RA	Response Action
RAWP	Response Action Work Plan
RC	Removal Contractor
RPM	Remedial Project Manager
SAP	Sampling and Analysis Plan
SHSO	Site Health and Safety Officer
TPIC	Third Party Independent Contractor
TQA	Third Party Quality Assurance
USACE	United States Army Corps of Engineers Rapid Response Program
VCI	Vermiculite-Containing Insulation
VCS	Vermiculite-Containing Soil

Section 1
Introduction

United States Army Corps of Engineers Rapid Response Program (USACE) is providing environmental engineering and remediation support to Region 8 of the Environmental Protection Agency (EPA) on the Libby Asbestos Superfund Project. USACE support includes the preparation of technical documents, development of environmental plans (e.g., sampling and analysis, removal action, etc.), environmental assessments and investigations, and remediation activities. Investigative and remediation actions are taking place under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund. USACE is providing support for the identification, removal and disposal of vermiculite-containing soil (VCS), Libby Amphibole Contaminated Soil (LACS), vermiculite-containing insulation (VCI), and dust at numerous operable units and residential properties located in and around Libby, Montana. The insulation, dust and soil at these properties may be contaminated with Libby Amphibole asbestos (LA) as a result of historic vermiculite mining in Libby, Montana by W.R. Grace.

Libby is the site of the former largest vermiculite mine in the world, which had been operational for 70 years. In the 1920s, the Zonolite Company formed and began mining vermiculite. In 1963, W.R. Grace bought the Zonolite mining operations and continued operating the mine until it closed in 1990. While in operation, the vermiculite mine in Libby is said to have produced 80 percent of the world's supply of vermiculite. Vermiculite has been used in building insulation and materials, as a soil conditioner, and as backfill material. It has been determined that the vermiculite from the Libby mine was contaminated with an exceedingly toxic form of naturally occurring asbestos called tremolite-actinolite asbestiform mineral fibers, herein referred to as LA.

Since late 1999, EPA has conducted comprehensive cleanup of properties throughout Libby, Montana. The purpose of this document is to outline operations at the former W.R. Grace Mine (mine), which will serve as a disposal location for contaminated soil and material from numerous operable units in Lincoln County, Montana as required by EPA. Currently, asbestos contaminated soil is disposed at the mine, and VCI, asbestos contaminated material (ACM), and vermiculite contaminated demolition debris are disposed of at an asbestos landfill. This Soil Disposal Plan for the Former W.R. Grace Mine serves as a guidance document for current and future project mine operations, but may be amended at any time to reflect changes in operations and/or protocol.

Section 2
Former W.R. Grace Mine Site Disposal Operations

2.1 Mine Site Disposal Operations Description

The mine site is located approximately 6.6 miles up Rainy Creek Road (Mine Road) from Highway 37 in Libby, Montana. Historically, this site was the origin of raw vermicuiite materials. All contaminated soils, and some commingled contaminated materials that are associated with EPA's response action in Libby will be disposed of at the mine.

Contaminated soils will be hauled to the mine site and disposed of at the former W.R. Grace Mine amphitheater area (amphitheater). A waste transfer station was constructed at the amphitheater prior to the 2003 construction season for overall project use. The Mine Road is paved from Highway 37 to the waste transfer station in order to allow trucks that are outfitted with positive pressure units to unload their waste and retum to work sites in the Libby area while staying on an asphalt surface. The asphalt road serves as a "clean" surface for trucks to travel on throughout the waste hauling trip. The Removal Contractor (RC) will utilize a water truck to maintain a clean asphalt surface during mine operations.

The truck driver will dump the contents of the truck's bed at the waste transfer station, and the RC will then proceed to wash the entire truck exterior, including the exterior of the truck bed, tailgate seal, and under carriage and tires, before allowing the truck to leave the exclusion zone. All means and methods shall be used to ensure that all soil is removed from the truck bed around the tailgate to allow a proper seal. Decontamination of the interior of the truck bed will not be required if the truck will retum to hauling contaminated material for the project. The exclusion zone begins approximately 100 yards past the green gate, which is located at the beginning of Mine Road, and continues the entire distance to the mine. The waste will then be tiansferred to trucks (dedicated to the exclusion zone) at the amphitheater staging area. These trucks will then haul the contaminated waste to the designated soil disposal areas at the mine. At the end of the work season, any equipment dedicated to the exclusion zone wiil require a complete decontamination as stated in Section 6 of this document.

The gravel roadway will be maintained by the RC, from the amphitheater to the designated soil disposal areas, to allow access to the mine for disposal of soil. The RC will use water trucks to provide proper dust control, and regular treatment of the roadway will be implemented to minimize the generation of dust from the road. Proper upkeep and maintenance of the road will occur periodically to prevent washouts and potholes from forming. The RC will also apply water to minimize dust generation around the disposal operations.

A separate operable decontamination (decon) pad has been installed within the waste transfer station for any vehicles traveling past the amphitheater. All non-dedicated

equipment must have prior authorization from an EPA or USACE representative to tiavel past the paved portion of the Mine Road. Figures 1 through 6 (Appendix A) are photographs with additional details imported onto them to further illustrate amphitheater and mine operations.

2.2 Disposal Objectives

The disposal activities at the mine site will continue each construction season as long as weather permits safe operation. Amphitheater operations may be able to start earlier and continue longer than actual operations at the soil disposal areas. If this is the case, contaminated soils and material will be stored at the amphitheater until operations to the soil disposal areas start up the following construction season.

This Soil Disposal Plan describes the minimum activities necessary to dispose of contaminated soil at designated mine site disposal locations. All transport and disposal work will be carried out in accordance with this document, the *Response Action Work Plan* (RAWP). Libby Asbestos Project, Libby, Montana, (PRI 2011), the *Comprehensive Accident Prevention Plan*. Libby Asbestos Project, Libby, Montana, (CDM 2011a), the Accident Prevention Plan (APP) developed by the RC, and all other government requirements.

Section 3
Mine Site Organization

3.1 Organization and Safety Responsibilities

The Libby Asbestos Project Mine Site Team will consist of the EPA Site Remedial Project Manager (RPM), USACE on-site representative, RC, Third Party Independent Contractor (TPIC), and Authorized Site Visitors.

The responsibilities of the mine site team are outiined in the following sections.

3.2 Mine Site Team

3.2.1 EPA Site Remedial Project Manager

The responsibilities of the EPA site RPM include, but are not limited to:

- Ensuring that mine site operations are conducted in accordance with applicable EPA, Occupational Safety and Health Administiation (OSHA), state, and project requirements to protect worker and public safety.
- Addressing project and safety-related concems from both the workforce and the community at large.
- Approving changes to this Plan.

EPA has the authority to shut down site operations where conditions warrant such actions. This includes, but is not limited, to conditions pertaining to site safety, quality, and/or weather.

3.2.2 USACE On-Site Representative

The responsibilities of the USACE on-site representative include, but are not limited to:

- Ensuring that this Plan is approved by the contiacting agency before commencement of operations, and is on-site during all project-related activities.
- Communicating with the RC and TPIC to ensure the mine site field personnel performs activities in accordance with contiact requirements.
- Attending the daily close-out construction meeting to assess field operations, health and safety issues, and communications between the mine site team.
- Ensuring that any changes in conditions, potential hazards, or other information critical to safe job performance is communicated to all site personnel.
- Enforcing overall RC and TPIC compliance with this document and applicable EPA, OSHA, state, and project requirements.

- Reviewing Site Health and Safety Officer (SHSO), Third Party Quality Assurance (TQA) personnel, and RC mine site inspection results and recommended corrective actions as these items relate to safety and contractual compliance.
- Ensuring that the RC submits an APP addressing Mine Road operations.
- Communicating with the USACE contracting officer when contractual issues arise.
- Attend a document review session and site meeting as stated in Section 3.3 of this document.

The USACE on-site representative has the authority to shut down site operations where conditions warrant such actions. This includes, but is not limited to, conditions pertaining to site safety, quality, and/or weather.

3.2.3 Removal Contractor

The responsibilities of the RC include, but are not limited to:

Operations

- Ensuring that an APP covering the scope of all project activities performed by the RC under the USACE contract is submitted to USACE and approved before the start of site work activities.
- Ensuring site work activities by the RC are performed in accordance with mine site guidance documents and requirements.
- Ensuring that all RC mine site personnel have completed the mine site's required training as described in Section 5 of this document, and that they understand the contents of the APP and this Plan.
- Ensuring that tiaining documentation is accurately maintained for RC mine site personnel.
- Providing the USACE on-site representative with an accurate list of RC mine site personnel at the start of the construction season.
- Ensuring that appropriate resources are allocated to RC mine site personnel.
- Selecting and identifying competent persons for project activities.
- Performing only those tasks they are instructed to perform and they are trained, qualified, and capable of performing.
- Communicating personnel changes and submitting proof of personnel training to the USACE on-site representative upon request.

- Ensuring that all visitors have authorized access, are tiained on mine site protocol, and have signed the visitor's log.
- Escorting authorized mine site visitors upon request.
- Providing 24-hour availability for consultation during on-site emergencies.
- Attending the daily close-out consti uction meeting to assess field operations, health and safety issues, and communications between the mine site team.
- Attending the guidance document review session described in Section 3.3 of this Plan.

Health and Safety

- Coordinating with the USACE on-site representative to ensure that all efforts are made to identify potential hazards and that appropriate conti ols are implemented for worker and public safety.
- Designating a qualified SHSO to oversee implementation of the APP.
- Ensuring all decontamination and water source requirements are met in the daily execution of mine site operations.
- Reporting any observed unsafe act and/or condition at, or affecting, the work site to the USACE on-site representative.
- Stopping work if unacceptable health or safety hazards are identified, and communicating the hazards to the USACE on-site representative and appropriate RC mine site personnel to ensure appropriate corrective actions are implemented to maintain a safe work environment.
- Coordinating and reviewing all mine site accident investigations and reporting.
- Performing regular and frequent site inspections to ensure that work areas are setup according to EPA, OSHA, state, and project requirements (these inspections are to be documented and available to the USACE on-site representative).
- Supervising on-site implementation and enforcement of the APP.
- Conducting frequent and regular inspections of mine site operations as they relate to health and safety.
- Correcting any site work practices and/or conditions that may result in injury and/or exposure to hazards.
- Using the proper personal protective equipment (PPE) provided and as specified in the APP.

- Following all field safety procedures for safe work practices including, but not limited to, the buddy system, communication, site control, decontamination, evacuations, and related emergency procedures.

- Ensuring that no work tasks are performed that deviate from the APP or this document.

3.2.4 Third Party Independent Contractor

The responsibilities of the TPIC include, but are not limited to:

- Ensuring site work activities by TPIC personnel are performed in accordance with mine site guidance documents and requirements.

- Ensuring that TPIC personnel have completed the mine site's required training as described in Section 5 of this Plan, and that they understand the contents of the APP and this Plan.

- Ensuring that training documentation is accurately maintained for TPIC personnel.

- Communicating personnel changes to the USACE on-site representative.

- Coordinating with the USACE on-site representative and RC to ensure that all efforts are made to identify potential hazards and that appropriate controls are implemented for worker and public safety.

- Designating a qualified TQA person to oversee implementation of the APP.

- Selecting and identifying competent persons for project activities.

- Reporting any observed unsafe act and/or condition at, or affecting the work site to the USACE on-site representative.

- Stopping work if unacceptable health or safety hazards are identified, and communicating the hazards to the USACE on-site representative to ensure appropriate corrective actions are implemented to maintain a safe work environment.

- Coordinating and reviewing all mine site accident investigations and reporting.

- Attending the daily close-out construction meeting to assess field operations, health and safety issues, and communications between the mine site team.

- Providing third party oversight of mine site operations.

- Conducting air monitoring in accordance with project guidance documents, providing air monitoring data to the RC, evaluating the air monitoring data and recommending any necessary changes to engineering controls, work practices, and PPE.

- Coordinating any modifications to the APP or this Plan, as they relate to health and safety, with the USACE on-site representative and RC.
- Reviewing site accident investigations and reporting as it pertains to TPIC personnel.
- Conducting site orientation training.
- Escorting authorized mine site visitors as directed by USACE or EPA.

3.2.5 Authorized Site Visitors

The responsibilities of authorized site visitors include, but are not limited to:

- Reading and signing the visitor health and safety orientation form.
- Receiving specific site hazard and safety instructions from the RC or TPIC.
- Reviewing and complying with the APP and this plan.
- Using PPE in accordance with the APP and this plans requirements to enter regulated work areas.
- Reporting any observed unsafe act and/or condition at, or affecting, the work site.

In addition, any official visitor seeking entry into work areas will present documentation of health and safety training in compliance with applicable OSHA requirements, medical surveillance examination and certification, and respirator fit testing. A visitor log will be maintained by the RC.

3.3 Guidance Document Review Session and Site Visit

At the start of each construction season, a formal document review session will be conducted by the USACE, and attended by the EPA site RPM, RC, and TPIC. The purpose of this session is to review this Plan, pertinent sections of the APP, and all definable features of work contained within this task order. This session will ensure that all entities participating in this task order are fully aware of and acknowledge reading and understanding the guidance document requirements.

A representative of the mine site property owner, EPA, and USACE will perform a site visit to the mine site on a tri-annual basis (beginning, middle, and end of construction season) in order to inspect the mine site operations. The USACE representative will utilize the standard Quality Assurance Report form for the Libby project to document the inspections. The inspections will be completed in order to ensure that all parties are in agreement with the mine site operations as they relate to soil placement and disposal and address any future areas of concern or needs for the site.

3.4 Mine Site Subcontractors

All subcontractors employed by the RC or TPIC to perform operations at the mine site shall be required to comply with the APP and this Plan. These subcontractor employees shall be required to fulfill the training requirements stipulated in Section 5 and to wear the PPE as described in Section 7 of this document.

The RC or TPIC shall be responsible for ensuring that its subcontractors performing operations at the mine site fulfill these requirements.

Section 4
Mine Site Operational Areas and Activities

The mine site will be closed to all unauthorized persons and vehicles that are not directly involved in the asbestos removal project. No public access will be permitted.

Mine site operations are divided into the following three distinct operational areas, each with their own set of specific requirements:

- The first operational area is the green gate/personnel decontamination area, which serves as the exclusion zone border. The exclusion zone starts approximately 100 yards beyond the green gate and personnel decontamination area.
- The second operational area is defined as the amphitheater, and extends from the exclusion zone border beyond the green gate approximately 2 miles, to the end of the paved road area located just past the amphitheater.
- The third operational area defined as soil disposal area consists of approximately 4.5 miles of unpaved road, leading up to and including the designated soil disposal locations as designated on Figure 6 in Appendix A of this document.

4.1 Operational Area 1: Green Gate/Personnel Decontamination Area

The purpose of this area is to serve as a security checkpoint to ensure unauthorized visitors and vehicles are not permitted to access the mine site area, to serve as a staging area to provide a personnel decontamination trailer, and to serve as an area for minor equipment storage. The RC shall provide the following:

- Security during mine site operational hours at the green gate.
- Personnel decontamination trailer in accordance with OSHA Standards 29 CFR 1910.141(b)(1)(i), and as defined in Section 6.2 of this document.
- All infrastructure necessary to maintain the personnel decontamination trailer such as a potable water storage tank, gray water storage tank, etc.

4.2 Operational Area 2: Amphitheater

The purpose of the amphitheater area is to serve as a material handling and staging location for haul trucks to dump and stage contaminated soils from remediation activities.

At the amphitheater, the RC shall conduct activities as follows:

- RC shall receive a project haul truck loaded with contaminated soil and organic materials from Libby asbestos project removals.

- RC shall direct project haul trucks to unload soils at a designated staging area within the amphitheater boundary.

- Once project haul trucks have been unloaded, RC shall thoroughly decontaminate the exterior of any vehicle leaving the exclusion zone. These decontamination operations will be conducted at the amphitheater decontamination pad.

- For project haul trucks, RC shall unlock tailgate locks and spray the tallgate seal and entire vehicle exterior, including the truck tires, with a pressurized water stream before allowing the truck to leave the exclusion zone. All means and methods shall be used to ensure that all soil is removed from the truck bed around the tailgate to allow a proper seal. Decontamination of the interior of the truck bed will not be required if the truck will returu to hauling contaminated material for the project. The truck shall then be visually inspected by the RC for remaining debris and tallgates re-locked, and truck covers re-fastened upon satisfaction of any inspection, before the truck is allowed back in rotation to the removal sites. For all other vehicles leaving the exclusion zone, the entire exterior, including the tires, shall be sprayed with a pressurized water stream by the RC before being allowed to leave the zone.

- The RC shall cover all dump trucks leaving the mine site in a manner such that no visible dust emissions are generated during transport. After the RC decontaminates the dump trucks, the RC shall tightly cover all truck beds with a weather tight canvas roll roof or other durable and tear-proof material in a marner such that emissions are not visible from the trucks at any time. Truck covers shall extend below the top of the truck body and be secured to the truck body with straps. Each truck cover shall be checked by the RC for condition and fit on the truck prior to the truck leaving the amphitheater. The RC shall notify the USACE on-site representative if truck covers become damaged or toru. Damaged covers shall be replaced or trucks shall be removed from service by the RC or subcontractor immediately following notification. In the event a truck tarp is in need of repair or replacement the truck bed and tarp shall receive a full decontamination by the RC. The RC shall be responsible for ensuring that all trucks leaving the mine site are covered as described above.

- All equipment dedicated to the mine site exclusion zone (e.g., dozer, front end loader, off-road haul trucks) that is leaving the exclusion zone shall undergo decontamination as stated below in Section 6.1.1.

- The RC shall supply water which meets the requirements stipulated in Section 10.2 of this Plan. The RC shall use an EPA approved water source for vehicle decontamination, equipment decontamination, and as a dust suppressant on the unpaved hauling road at the mine. Potable water must be used for personal decontamination as stated in the APP.

The RC shall provide all equipment and personnel necessary to perform material handling, staging and vehicle decontaminatron at the amphitheater.

4.3 Operational Area 3: Hauling Road and Soil Disposal Areas

The purpose of the unpaved hauling road and designated disposal areas is to serve as a safe means to deliver and dispose of contaminated soil and organic debris to their final disposal location.

For the hauling road and soil disposal areas, the RC shall conduct activities as follows:

- RC shall load trucks with contaminated soils staged within the amphitheater boundary.
- RC shall ensure that soils are sufficiently wet before leaving the amphitheater for disposal at designated areas to minimize dust migration while tiaveling on the unpaved haul road.
- RC shall haul loads to the designated soil disposal areas; the RC shall ensure that soils are placed in the correct designated area as located on the soil disposal map in Appendix A.

Loading of trucks at the amphitheater by the RC, for disposal of stockpiled material, shall be performed in a manner that will minimize visible dust, sloughing of soils off trucks, and that is in compliance with all air monitoring levels established by EPA for the Libby project. It is required that the RC utilizes proper engineering controls to control dust emissions during the following operations:

- Truck dumping at the amphitheater and all final disposal areas.
- Truck loading at the amphitheater for hauling to the disposal locations.
- Hauling from the amphitheater to the disposal locations.

The RC shall provide all equipment and personnel necessary to maintain the hauling road and to perform material hauling, placement and disposal operations at designated disposal areas.

4.4 Communication

The RC shall supply an effective means of communication for mine site operations. The RC shall also install Citizens Band radios in each truck so that every driver has a reliable communication source during hauling operatrons at the mine site. A landline phone located in a red box is available for emergency use at the amphitheater. Coordination, loading, hauling, dumping, decontamination, and ail related activities will be done in an efficient manner with a minimum amount of down time.

4.5 Traffic Control

The RC shall provide a traffic control plan for the mine site. Traffic control and speed limits must be established by the RC and strictly adhered to in order to accommodate the truck volume, and to continue operating in a safe manner. The RC must ensure that speed limits on all site haul roads are established and approved by the USACE on-site representative and that these limits are clearly posted for all incoming and outgoing traffic. The RC will ensure that all visitors to the mine site are provided a copy of the traffic control plan prior to entering the site.

4.6 Recordkeeping

Trucks transporting materials to the amphitheater will not be weighed for purposes of determining quantrties of contaminated soil and other materials (e.g., organic wastes such as shrubs, bushes, trees) being disposed at the mine. However, trucks traveling to the amphitheater will be counted and documented by the RC in a daily log of disposal activities. Waste shipment records will be maintained by the RC and a copy furuished to the EPA records center at the end of each season.

The RC shall inspect and document the following on a regular and frequent basis:

- All site equipment inspections.
- Ail filter change outs on equipment, including those relating to water filtration and vehicle air filters.
- Testing potable water for personnel decontamination.

The above documentation shall be made available to USACE or TQA personnel upon request.

Section 5
Personnel Training

RC conducting amphitheater and soil disposal operatrons, and dedicated material hauling operations from the amphitheater to the soil disposal areas, must be trained and current in accordance with the following requirements:

- OSHA 40-Hour Hazardous Waste Operations and Emergency Response (HAZWOPER)
- OSHA 8-Hour HAZWOPER refresher, if applicable
- Training specific to the APP and this Plan's requirements, provided by the RC

All personnel training must be fully documented and available upon request by USACE. The USACE on-site representative must be informed of personnel changes to ensure that persormel have been adequately trained on the requirements of this document and any other pertinent contract requirements.

Personnel conducting material hauling operations to the amphitheater must be trained and current in accordance with the following requirements:

- APP
- OSHA 40-Hour HAZWOPER
- OSHA 8-Hour HAZWOPER refresher, if applicable
- Mine site traffic control plan

Section 6
Decontamination

The RC shall designate personnel to ensure that all decontamination activities discussed in this section are conducted accordingly.

6.1 Equipment Decontamination

The RC shall thoroughly decontaminate any vehicle leaving the exclusion zone. These decontamination operations shall be conducted at the amphitheater site. For project hauling trucks, the RC shall unlock tailgate locks and spray the entire vehicle exterior, including the truck tires, by pressurized water stream before allowing the truck to leave the exclusion zone. All means and methods shall be used to ensure that all soil is removed from the area around the tailgate to allow a proper seal. The truck shall then be visually inspected by the RC for remaining debris and tailgates re-locked, and truck covers re-fastened upon satisfaction of any inspection, before the truck is allowed back in rotation to the removal sites. Removal of residual soil from the interior of the truck bed shall not be required if the truck will continue to haul contaminated material, so long as the tail gate seal and tarps are performing adequately.

For all other vehicles leaving the exclusion zone, the entire exterior, including the tires, shall be sprayed by an effective means by the RC before being allowed to leave the zone.

In addition, all equipment dedicated to the mine site exclusion zone (e.g., dozer, front end loader) that is leaving the exclusion zone shall undergo decontamination as stated below in Section 6.1.1.

6.1.1 Demobilization Requirements

In addition to the daily decontamination operations at the amphitheater, at the end of the work season or the end of project service for that particular piece of equipment, the RC shall:

- Follow all decontamination requirements as stated in Section 7 of the RAWP (PRI 2011).
- Decontaminate all interior (with HEPA vacuum and wet wiping) and exterior (by a pressurized water stream) surface areas of any equipment dedicated to the exclusion zone.
- Remove and replace all equipment air filters and properly dispose of the discarded items as ACM.
- Notify USACE prior to demobilizing any equipment from the mine site.

6.2 Personnel Decontamination

Proper three-stage decontamination facilities and restroom facilities on the border of the exclusion and clean zones shall be established by the RC. Each decontamination facility shall meet or exceed applicable OSHA requirements, specifically those details pertaining to Safety and Health Regulations for Construction and asbestos as outlined in OSHA Standards 29 CFR 1926.1101. Each personnel decontamination facility provided by the RC shall consist of a negative air filtrated dirty room, shower area with potable water, and clean room. The RC shall provide each personnel decontamination facility with a first-aid kit, proper fire extinguishers, and full engineering controls including, but not limited to, negative air filtration units, employee PPE, fences, signs, traffic tape, etc.

The RC shall provide hot and cold potable water to the decontamination facility, for use in personnel decontamination as specified in OSHA Standards 29 CFR 1910.141(b)(1)(i) and 1926.51. All potable water delivery systems must be disinfected by the RC on a regular schedule, as approved by the SHSO, with greater frequency during the summer months. Documentation of potable water equipment inspections and disinfections must be maintained by the RC, posted at the mine site, and provided to the USACE on-site representative upon request.

The RC shall maintain all site personnel decontamination facilities and their operations in accordance with the RAWP (PRI 2011) and all applicable OSHA regulations, including those listed above. Sufficient heat, lighting, and electric power are required at each personnel decontamination facility. All decontamination water shall be collected and properly disposed of by the RC at the amphitheatre. All personnel who enter through the exclusion zone must use the decontamination facilities whenever leaving the exclusion zone and when their work shift is completed.

Section 7
Health and Safety

All mine operations shall be conducted in PPE which complies with the APP. Only employees tiained in accordance with Section 5 of this document will be permitted past the green gate on the Mine Road. All work during mine operations shall comply with the RAWP (PRI 2011) and APP and this Plan. Minimum required elements of the APP are as follows:

- Delineation of work zones including exclusion zone, contamination reduction zone, and support zone
- Description of site hazards and contaminants (asbestos)
- Identification of the mine site SHSO
- Description of PPE, including the use of powered air purifying respirators (PAPRs), for all site activities
- Any site field monitoring to be performed
- Personnel and equipment decontamination procedures
- Emergency contact names and phone numbers
- Signature page signed by all site personnel indicating that the APP is understood and will be complied with
- Plan for equipment and personnel site water use
- Grey water management plan
- Procedure for personnel breaks within the exclusion zone

Personal air monitoring shall be performed by the TPIC. Personal air monitoring shall be conducted at a frequency based on the results of an assessment done in accordance with OSHA regulations and the APP.

Section 8
Air Monitoring

EPA will be responsible for all planning, coordinating, and conducting of air monitoring during mine site transport and disposal activities. The TPIC shall provide all labor, equipment, materials, and incidentals required to perform all perimeter and personal air monitoring throughout the transport and disposal work at all locations identified in this operatrons plan. All air monitoring functions shall meet the applicable OSHA regulations, APP and all govemment requirements.

Personal air sampling shall be conducted on all activities performed by the RC to document compliance with OSHA Standards 29 CFR Part 1926.1101. All personal air samples shall be collected and analyzed in accordance with OSHA Standards 29 CFR 1926.1101. Additional air sampling protocol is addressed in the *Response Action Sampling and Analysis Plan* (RA SAP), Libby Asbestos Project, Libby Montana, (CDM 2011b), and all subsequent revisions.

Section 9
Transportation Activities

9.1 General

All truck drivers and personnel that perform operations at the mine site must be trained in accordance with Section 5 of this Plan. All trucks operating at the mine site must be outfitted with a positive pressure cab for truck driver safety.

In order to be successful, the RC shall be responsible for planning, coordinating, controlling, and performing all transportation activities associated directly with mine operations. This includes, but is not limited to, determining and subcontracting the number of trucks and drivers needed for hauling materials from the amphitheater designated disposal areas, providing equipment and operators for loading trucks, covering all loads, providing equipment and personnel decontamination, dust suppression, disposal operations, Mine Road maintenance, traffic controls including signage, and all related work. Disposal activities are to be performed in a safe manner while adhering to the requirements of this Plan and the APP. Truck and driver numbers may be adjusted as necessary pertaining to the transport and disposal activities, as to minimize down time.

9.2 Dumping

Coordination of the disposal activities shall be implemented by the RC at the amphitheater staging area and designated disposal areas. The dumping of any material shall be performed in a manner such that there are no visible dust emissions. Areas where disposal takes place shall be sprayed with water by the RC to prevent dust emissions. The RC shall be responsible to mitigate dust emissions in all active working areas until dust levels drop to acceptable levels as required by EPA, and do not endanger or impede the performance of personnel working in the area.

Section 10
Disposal Site Management
10.1 Staffing

Coordination and planning of disposal activities at the mine site with respect to transport activities shall be implemented by the RC. The RC shall equip staff with an appropriate means of communication in the trucks so that traffic runs smoothly and efficiently throughout the entire operation. The RC shall be responsible for directing trucks to the appropriate disposal site and proper disposal locations. The RC shall have a sufficient number of personnel to provide adequate water for dust suppression at the amphitheater and soil disposal areas, and for directing truck traffic and other RC subcontractors throughout the operatron. The RC must inform the USACE on-site representative prior to personnel changes, to ensure that persormel have been adequately trained on the requirements of this contract.

10.2 Dust Suppression on Mine Road

Dust suppression is a primary concern with respect to transport and disposal activities on this project.

The lower 2 miles of the Mine Road is paved with asphalt. Trucks and other equipment leaving the exclusion zone shall be decontaminated at the amphitheater decontamination facility and proceed onto the paved portion of the Mine Road to Highway 37. The primary method of dust control shall be spraying with water. The RC shall obtain water for dust suppression of the paved portion of the Mine Road from an EPA approved source as stated in Section 10.3 of this Plan.

The upper portion of the Mine Road is dirt and gravel. The RC shall be required to apply a dust suppressant to this portion of the road as directed by the USACE. Typically magnesium chloride, calcium chloride or road oil has been used as a dust suppressant on the road. Prior to the RC or its subcontractor applying a chemical (non-water) dust suppressant, the RC must first get approval from the USACE on-site representative.

The RC shail use designated "dirty" trucks to move contaminated soils and materials from the waste transfer station at the amphitheater to the soil disposal areas. These "dirty" trucks never leave the exclusion zone without a full decontamination. The RC shall maintain an adequate water supply and a sufficient nuruber of water trucks and drivers to keep the Mine Road free from visible dust emissions at ail times when transport actrvitres are underway. Water truck drivers shail be required to meet the same OSHA health and safety requirements as drivers of trucks hauling asbestos contaminated soils and other materials. The RC shall employ dust suppression measures in corupliance with die requirements established by Montana Department of Transportation, the goverument, and APP.

Dust suppression must be strictiy maintained by the RC. If visible dust emissions are observed for any mine site activity, work shall be immediately shut down until corrective actions are implemented.

10.3 Water Supply

The RC is responsible for supplying adequate water essential for operations at soil disposal areas, along the Mine Road (paved and unpaved portions), at the amphitheater and at the personnel decontamination facility. There wiil be access to a settling pond located adjacent to the amphitheater for use in dust suppression for areas above the amphitheater. The RC shall use water from city supplies or water drawn from the Kootenai River pump site located in Operable Unit 2/Flyway up-gradient from Rainy Creek or the Libby City Kootenai River pump site located in OU1 for vehicle and equipment decontamination. Potable water must be used for the persomel decontamination facility.

The water utilized for equipment decontamination shall be sampled on a regular and frequent basis for LA by the TPIC. Any water not meeting project standards, from a mine site source or otherwise, shall be rejected for its intended use, and mine site operations shall cease until fhe situation is corrected to the satisfaction of EPA.

If EPA determines that the settling pond is not an acceptable water source, the RC must haul water to the site for use as dust suppression on the haul road from the amphitheater to the soil disposal areas.

The RC shall document the following, which shall be made available to the USACE on-site representative or designee upon request:

- If filtering water, the filter changes, chlorine tests, and pressure differentials.
- If hauling potable water, tests such as chlorine levels to ensure water is potable.

In addition, the RC shall:

- Provide required training to any site personnel involved in operations of water from on-site sources and used for site operations. This training shall be comprehensive and include, but is not limited to, the safe operations of the equipment involved, the proper use of the 20 and 5 micron filters, the schedule for changing the filters, the ability to evaluate whether the filters need changing, and how to change the filters, in the event filtratron systems are used.
- Ensure that ail site personnel involved in mine site operations, including those involved with using mine site sourced water, are competent in their assigned tasks. This includes having the knowledge, ability, and authority to take correctrve actions when necessary.
- Provide such training documentation to USACE or its representatives when requested.

10.4 Disposal Site Procedures

Traffic flow shall be coordinated at the disposal locations by the RC. Traffic flow includes the loading, transport, disposal, and departure of trucks so that each category of material is disposed at the disposal location designated by EPA to receive that particular waste. The RC shall direct each truck to the proper disposal location, direct the physical dumping of each truck load, provide acceptable dust suppression, conduct decontamination procedures, and provide the front end loader, bulldozer and all other mechanical equipment necessary to effectively operate the complete mine operations.

All reasonable attempts to segregate non-soil waste shall be performed on all removal sites before they are brought for disposal at the mine site amphitheater. Any non-organic waste (e.g., plastic, tires, railroad ties) hauled to the mine site amphitheater shall be segregated by the RC and staged in separate piles to be disposed of at an area designated by EPA. In addition, waste debris such as rock and gravel which may be used for haul road maintenance may be staged in a separate area at the amphitheater, upon the request of EPA.

Soil shall be placed by the RC at the soil disposal areas in 30 cubic yard stockpiles separated by 15 feet in all directions and performed in a manner by which it will be feasible for the property owner to spread the stockpiles and use as a cover in the future, unless otherwise directed by the EPA or USACE.

Daily cover will not be placed at the disposal sites. A final design for mine stabilization once the project is complete has not yet been finalized.

10.5 Spill Prevention

The RC shall not allow any pollutants (e.g., chemicals, oils, fuels) to enter and pollute any soil, surface water, or groundwater in the mine site area. The RC shall lubricate or fuel all vehicles or equipment utilized on-site in a controlled manner, capturing all excess or waste materials and disposing of it in accordance with applicable federal, state, and local regulations. All RC mine site personnel and RC subcontractors shall comply with appilcable federal, state, and local regulations conceruing pollution of soils, surface water, and groundwater. Special measures, with approval from EPA, may be implemented by the RC to prevent chemicals, fuels, oils, greases, and other materials from entering soils, surface waters, and groundwater.

10.6 Decontamination Wastewater

The RC shail ensure that ail wastewater from vehicle and equipment decontamination on fhe asphalt pad is contiolled so that it drains towards and is captured at the amphitheater disposal location. In addition, the RC shail ensure persomel decontamination wastewater is captured and properly disposed of.

10.7 Site Security

The RC shall provide security at the entrance of the mine site, before the green gate, during normal remedial operations hours. Normal operations consist of a regular work week, Monday through Friday, 6:00 a.m. to 5:30 p.m. The mine operations schedule shall be contingent on proper weather and road conditions. Operation hours may change with prior permission from the USACE on-site representative. Road closure and trespassing signs shall be placed, maintained and checked on a frequent basis at all access points directed by EPA which lead to the mine site. The mine site shall be closed to all unauthorized motorized and pedestrian/foot traffic.

Section 11
References

CDM 2011a. *Comprehensive Accident Prevention Plan*, Libby Asbestos Project, Libby Montana. March

_____. 2011b. Revision 2. *Response Action Sampling and Analysis Plan*, Libby Asbestos Site, Libby, Montana. April.

Occupational Safety and Health Administiation. Title 29 Code of Federal Regulations Parts 1910 and 1926.

PRI 2011. *Response Action Work Plan*, Libby Asbestos Project, Libby, Montana. April.

US Army Corps of Engineers. EM 385-1-1. 15 September 2008. Safety and Health Requirements Manual.

Appendix A
Figures

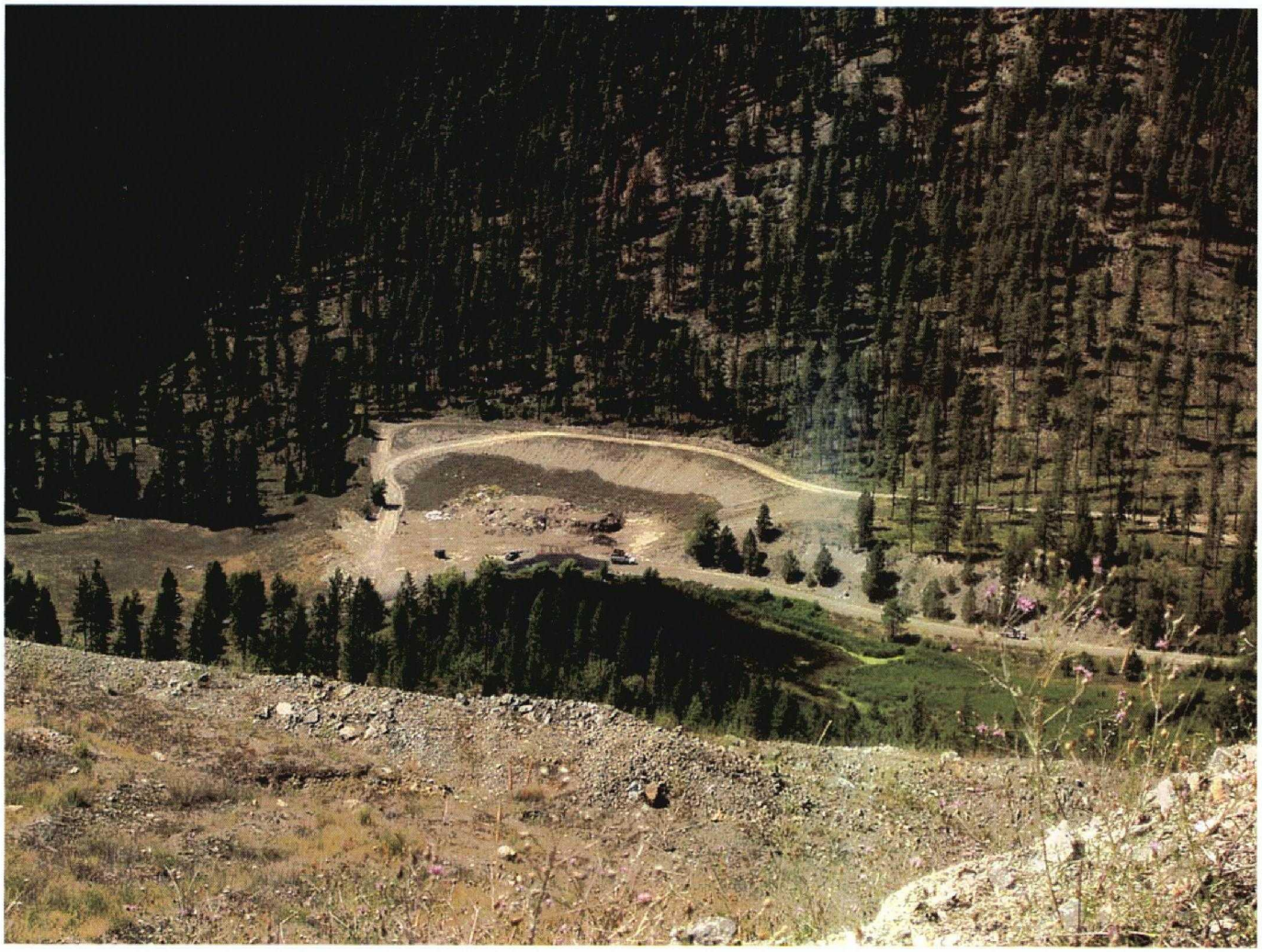

Figure 1: Full Aerial View of Amphitheater

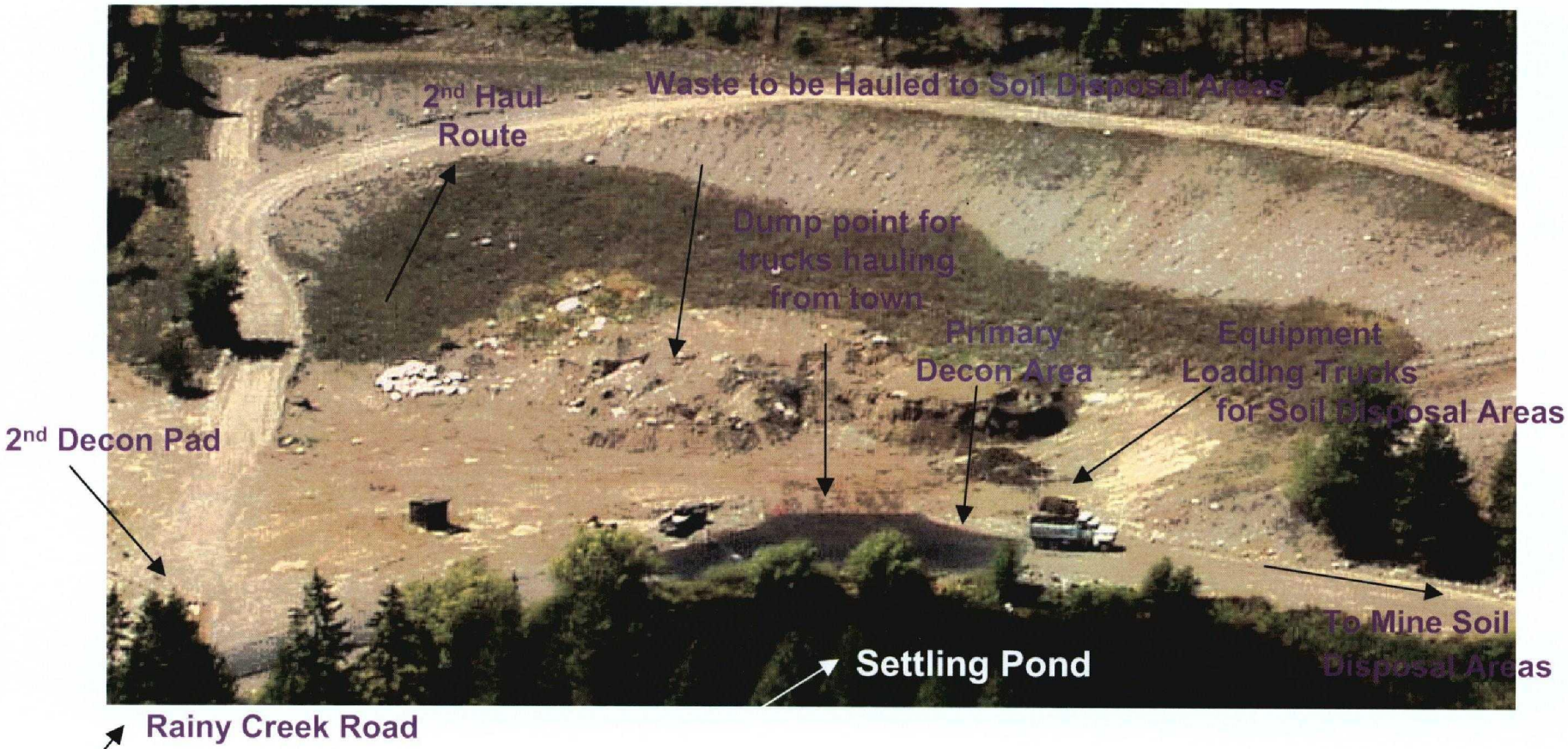

Figure 2: Detailed Aerial View of Amphitheater

Figure 3: Dumping at the Amphitheater by Local Trucks

Figure 4: Alternate View of Amphitheater from 2nd Haul Route

Figure 5: Soil Disposal Area

DISPOSAL LOCATION AREAS	
AREA 1	585,172 SQ. FT.
AREA 2	2,239,792 SQ. FT.
AREA 3	1,196,958 SQ. FT.
AREA 4	324,125 SQ. FT.
AREA 5	314,663 SQ. FT.
AREA 6	360,618 SQ. FT.

Figure 6 - Disposal Location Areas
figure courtesy of PRI

VICINITY OF SITE

GEOUNIT #: N/A ROW GEOUNIT #: N/A
AD #: N/A
BID #: N/A
ASSOCIATED BID #'S: N/A

PRI

US ARMY CORPS OF ENGINEERS
OMAHA DISTRICT
RAPID RESPONSE PROGRAM

DESIGNED BY / DATE: E. ROMERO 05/27/11
QC REVIEWER / DATE: H. FOWLER 05/27/11
INV. REVIEWER / DATE: N/A
PRE REVIEWER / DATE: N/A
RRA MEETING / DATE: N/A
DESIGN FINALIZED BY / DATE: N/A
REDLINE SUBMITTED BY / DATE: N/A

US EPA
Region VIII
Denver, Colorado

LIBBY ASBESTOS SITE
LIBBY, MONTANA
W.R. GRACE
RAINY CREEK MINE
SOIL PLACEMENT PLAN

SCALE: AS NOTED
DATE: 05/27/11
SHEET #: 1 OF 1
PLOT SCALE: 1 : 1
DESIGN TYPE: GPI
FILE LOCATION: ..\2011 PROPERTIES\OU3\MINE SOIL PLACEMENT PLAN.DWG

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